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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/276,346	03/25/1999	SENTHIL K. VISWANATHAN	33361-00026U	1967

23990 7590 09/04/2002

DOCKET CLERK
P.O. DRAWER 800889
DALLAS, TX 75380

EXAMINER

HO, CHUONG T

ART UNIT	PAPER NUMBER
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2664

DATE MAILED: 09/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/276,346

Applicant(s)
Senthil K. Viswanathan et al.

Examiner
Ho

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s). 4 6) ☐ Other:

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DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6, 10-11, 15-18, 19, 21-22 are rejected under 35 U.S.C. 102(b) as being anticipated by McGill (U.S. Patent No. 5,436,886).

In the claim 1, McGill teaches the invention is directed to an ATM switch of dual plane operation for exchanging cells among a plurality of bidirectional ports through a first and second switch plane. Each of the plurality of bidirectional ports is connected to a plurality of line-cards to receive the cells therefrom and transmit the cells thereto. The ATM switch comprises a first and a second switch fabric connected to the plurality of bidirectional ports for transferring the cells among bidirectional ports. The first switch fabric is in the first switch plane and the second switch fabric is in the second switch plane; comprising:

- ♦ working circuitry (working plane, figure 3) configured to receive a first stream of communication data (see col. 4, lines 55-60);
- ♦ protection circuitry (protection plane, figure 3) configured to receive a second stream of communication data, the second stream being identical (identical traffic, see col. 76, lines

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19-20) to the first stream, the protection circuitry and the working circuitry being functionally identical and synchronized to each other (see figure 9, col. 7, lines 20-25);

- ◆ a cross point switch (D, see figure 5) configured to select from one of the first stream and the second stream and further configured to select and substitute the second stream for the first stream upon detection of an error condition in at least one of the working circuitry and the first stream of communication data (see col. 6, lines 13-21).

3. In the claim 2, McGill discloses the communication data is ATM cells data (see col.7, lines 18-25).

4. In the claim 3, McGill discloses the working circuitry (working plane) receives the first stream from an optical signal (fiber optic signal) and the protection circuitry (protection plane) receives the second stream from the optical signal (see col.4, lines 55-65).

5. In the claim 4, McGill discloses the working circuitry (working plane) is implemented on a first circuitry board and the protection circuitry (protection plane) is implemented on a second circuitry board, the first circuitry board being separate and distinct from the second circuit board (see figure 3, see col. 4, lines 55-60).

6. In the claim 5, McGill discloses the working circuitry includes a plurality of first ATM channels performing ATM functions on the first stream and the protection circuitry includes a plurality of second ATM channels performing the ATM function on the second stream (see figure 5, col. 4, lines 55-65).

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7. In the claim 6, McGill discloses one of the first ATM channels and one of the second ATM channels each include a multiplexer (see col. 5, lines 17-20).

8. In the claim 10, McGill discloses the working circuitry and having a plurality of ports wherein one of the ports accesses the first stream as input to the working circuitry (see figure 5).

In the claim 11, McGill discloses the protection circuitry and having a plurality of ports wherein one of the ports accepts the second stream as input into the protection circuitry (see figure 5).

9. In the claim 15, McGill teaches the error condition is a facility error condition (see col. 4, lines 55-65).

10. In the claims 16, 17, 18, McGill teaches the facility error condition includes a disconnected cable (see figure 5, col. 4, lines 55-65).

11. In the claim 19, McGill teaches the invention is directed to an ATM switch of dual plane operation for exchanging cells among a plurality of bidirectional ports through a first and second switch plane. Each of the plurality of bidirectional ports is connected to a plurality of line-cards to receive the cells therefrom and transmit the cells thereto. The ATM switch comprises a first and a second switch fabric connected to the plurality of bidirectional ports for transferring the cells among bidirectional ports. The first switch fabric is in the first switch plane and the second switch fabric is in the second switch plane; comprising:

- ◆ perform a group of ATM functions with first circuitry on a first stream of ATM cells producing a processed first stream (see figure 3, col. 4, lines 55-60);

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- ◆ perform the ATM functions with second circuitry on a second stream of ATM cells producing a processed second stream , the second stream being identical (identical ATM cells, see col. 5, lines 20-25) to the first stream, the first circuitry and the second circuitry implementing the ATM functions, the first circuitry and the second circuitry being synchronized to each other (see col. 5, lines 20-25, col. 6, lines 13-21, col. 4, lines 55-65);
- ◆ substituting the second processed stream for the first processed stream for input to a designated port of an ATM switch upon detection of an error condition in the first circuitry, the first processed stream having initially been selected for input to the designated port of the ATM switch, thereby providing redundancy protection for the ATM functions (see col. 5, lines 20-25, col. 6, lines 13-21, col. 4, lines 55-65).

12. In the claim 21, McGill teaches the invention is directed to an ATM switch of dual plane operation for exchanging cells among a plurality of bidirectional ports through a first and second switch plane. Each of the plurality of bidirectional ports is connected to a plurality of line-cards to receive the cells therefrom and transmit the cells thereto. The ATM switch comprises a first and a second switch fabric connected to the plurality of bidirectional ports for transferring the cells among bidirectional ports. The first switch fabric is in the first switch plane and the second switch fabric is in the second switch plane; comprising:

- ◆ receiving a first stream of ATM cells (see col. 5, lines 20-25, col. 6, lines 13-21, col. 4, lines 55-65);

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- ◆ forming a second stream of ATM cells identical to the first stream of ATM cells (see col. 5, lines 20-25, col. 6, lines 13-21, col. 4, lines 55-65);
- ◆ detecting an error condition associated with the first stream; and switching from the first stream to the second stream upon detection of the error condition (see col. 5, lines 20-25, col. 6, lines 13-21, col. 4, lines 55-65).

13. In the claim 22, McGill discloses the invention is directed to an ATM switch of dual plane operation for exchanging cells among a plurality of bidirectional ports through a first and second switch plane. Each of the plurality of bidirectional ports is connected to a plurality of line-cards to receive the cells therefrom and transmit the cells thereto. The ATM switch comprises a first and a second switch fabric connected to the plurality of bidirectional ports for transferring the cells among bidirectional ports. The first switch fabric is in the first switch plane and the second switch fabric is in the second switch plane; comprising:

- ◆ upon a crosspoint switch (point D) to duplicate ATM calls (see col. 5, lines 20-25, col. 6, lines 13-21, col. 4, lines 55-65);
- ◆ crosspoint switch (point D) to send redundant cells to two different paths (see figure 5, see col. 5, lines 20-25, col. 6, lines 13-21, col. 4, lines 55-65).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

15. Claims 7-9, 12-14, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over McGill (U.S. Patent No. 5,436,886) in view of Akiyoshi (U.S. Patent No. 5,715,237).

In the claims 8, 7, 20, McGill discloses the limitations as claim 1 above.

However, Miyashita et al. does not disclose one of the first ATM channels and one of the second ATM channels includes a router.

Akiyoshi discloses the invention relates more particularly to a relay system and a digital switching equipment that are capable of preventing a discard the block (packet, frame or ATM cell) of the digital data when relayed (see col. 1, lines 13-15); comprising:

- ♦ one of the first ATM channels and one of the second ATM channels includes a routers (see figure 1, see col. 4, lines 60-67, col. 10, lines 52-67).

Given the teaching of Akiyoshi, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify McGill's system to provide one of the first ATM channels and one of the second ATM channels includes a routers in order to place internal code in the ATM cells for routing the cell through the switch fabric. Therefore, the combined system would have been enabled the routers to perform operations on ATM cells stream to prepare them for routing to the external network.

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16. In the claim 9, Akiyoshi discloses one of the first ATM channels and one of the second ATM channels includes a user parameter control unit (see col. 35, lines 5-60).

17. In the claim 12, Akiyoshi discloses an ATM switch fabric having a plurality of input ports, a plurality of output ports, and configured to transfer an ATM cell from one of plurality of input ports to anyone of plurality of output ports, ATM cell being received from working circuitry as part of first stream (see figure 1, col. 10, lines 55-65, col. 11, lines 10-22).

18. In the claim 13, Akiyoshi discloses an ATM switch fabric having a plurality of input ports, a plurality of output ports, and configured to transfer an ATM cells from one of plurality of input ports to anyone of plurality of output ports, ATM cells being received from protection circuitry as part of second stream (see figure 1, col. 10, lines 55-65, col. 11, lines 10-22).

19. In the claim 14, McGill discloses a second cross point switch point configured to receive ATM cells from one of the plurality of output ports of the ATM switch fabric and to direct the received ATM cells to one of an output portion of a second working circuitry and an output portion of a second protection circuitry (see figure 5, col. 4, lines 55-65).

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Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong Ho whose telephone number is (703)306-4529. The examiner can normally be reached on Monday-Friday from 9am to 3pm.

21. If attempt to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wellington, Chin, can be reached on (703)305-4633.

Any inquiry of a general nature or relating to the status of this application or proceeding should be direct to the group receptionist whose telephone number is (703) 305-3900.

CH

Date 08-24-02.



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